

CLAIMS

[1] A film covered electric device comprising:

an electric device element to which a positive pole lead and a negative pole lead are connected; and

5 a casing film having at least a metal layer and a thermally sealable resin layer laminated to each other, said casing film sandwiching said electric device element from both sides in its thickness direction with said thermally sealable resin layer being placed inside, wrapping said electric device element, and being thermally sealed around said electric device element to seal said electric device element with said leads extended therefrom,

10 wherein said casing film has a cup area for receiving said electric device element therein, whereby a thermally sealed area formed by thermally sealing said casing film is positioned between both surfaces of said electric device element in the thickness direction in regard to the thickness direction of said electric device element,

15 at least one of sides of said casing film, from which said leads are not extended, is formed with a close contact zone in which said casing films directly opposing without intervention of said electric device element are in close contact with each other without being thermally sealed, between said thermally sealed area and said electric device element, and

20 $L2 \geq (1/2)L1$ is satisfied, where $L1$ is a distance from one end to the other end of an inner edge of said thermally sealed area and $L2$ is the length of said close contact zone in a direction along the side formed with said close contact zone.

[2] The film covered electric device according to claim 1, wherein said close contact zone is formed at a position including a center of a range from

one end to the other end of an inner edge of said thermally sealed area on the side formed with said close contact zone.

[3] The film covered electric device according to claim 2, wherein said close contact zone is formed over the entire range from one end to the other end of the inner edge of said thermally sealed area on the side formed with said close contact zone.

[4] The film covered electric device according to claim 2, wherein said close contact zone has a width which continuously or discontinuously varies such that the width is largest at the center in the range from one end to the other end of the inner edge of said thermally sealed area on the side formed with said close contact zone.

[5] The film covered electric device according to claim 1, wherein said close contact zone is formed along all sides of said casing film from which said leads are not extended.

[6] The film covered electric device according to claim 1, wherein said cup area is formed on both sides in the thickness direction of said electric device element.

[7] The film covered electric device according to claim 1, wherein said close contact zone has a width of 0.5 mm or more.

[8] The film covered electric device according to claim 1, wherein said electric device element has a thickness of 6 mm or more.

[9] The film covered electric device according to claim 1, wherein said electric device element is a chemical cell element or a capacitor element.

[10] A method of manufacturing a film covered electric device, comprising the steps of:

sandwiching an electric device element to which a positive pole lead and a negative pole lead are connected by a casing films having at least a

5 metal layer and thermally sealable resin layer laminated to each other from both sides in a thickness direction of said electric device element;

thermally sealing peripheral sides of said casing film which sandwiches said electric device element with said leads being extended from said casing films to seal said electric device element within said casing film,

10 wherein at least the last one side of the peripheral sides is thermally sealed in a reduced pressure atmosphere; and

returning surroundings of said casing film which seals said electric device element into an atmospheric pressure,

15 wherein said step of thermally sealing said casing film thermally seals at least one of the sides from which said leads are not extended by applying pressure to said casing film with a thermal sealing head for heating and pressurizing said casing films being placed at a position spaced apart by 2 mm or more from said electric device element.